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**FEDERAL - STATE - PRIVATE  
COOPERATIVE SNOW SURVEYS**



# ***WATER SUPPLY OUTLOOK FOR ARIZONA***

Prepared by  
**U. S. DEPARTMENT of AGRICULTURE ★ SOIL CONSERVATION SERVICE**  
Collaborating with  
**SALT RIVER VALLEY WATER USERS ASSOCIATION**  
and  
**ARIZONA AGRICULTURAL EXPERIMENT STATION**

Data included in this report were obtained by the agencies named above in cooperation with the Federal, State and private organizations listed on the last page of this report.

AS OF  
**FEB. 15, 1972**

## TO RECIPIENTS OF WATER SUPPLY OUTLOOK REPORTS:

Most of the usable water in western states originates as mountain snowfall. This snowfall accumulates during the winter and spring, several months before the snow melts and appears as streamflow. Since the runoff from precipitation as snow is delayed, estimates of snowmelt runoff can be made well in advance of its occurrence. Streamflow forecasts published in this report are based principally on measurement of the water equivalent of the mountain snowpack.

Forecasts become more accurate as more of the data affecting runoff are measured. All forecasts assume that climatic factors during the remainder of the snow accumulation and melt season will interact with a resultant average effect on runoff. Early season forecasts are therefore subject to a greater change than those made on later dates.

The snow course measurement is obtained by sampling snow depth and water equivalent at surveyed and marked locations in mountain areas. A total of about ten samples are taken at each location. The average of these are reported as snow depth and water equivalent. These measurements are repeated in the same location near the same dates each year.

Snow surveys are made monthly or semi-monthly from January 1 through June 1 in most states. There are about 1900 snow courses in Western United States and in the Columbia Basin in British Columbia. Networks of automatic snow water equivalent and related data sensing devices, along with radio telemetry are expanding and will provide a continuous record of snow water and other parameters of key locations.

Detailed data on snow course and soil moisture measurements are presented in state and local reports. Other data on reservoir storage, summaries of precipitation, current streamflow, and soil moisture conditions at valley elevations are also included. The report for Western United States presents a broad picture of water supply outlook conditions, including selected streamflow forecasts, summary of snow accumulation to date, and storage in larger reservoirs.

Snow survey and soil moisture data for the period of record are published by the Soil Conservation Service by states about every five years. Data for the current year is summarized in a West-wide basic data summary and published about October 1 of each year.

COVER PHOTO NUMBER ORC 221-3

## PUBLISHED BY SOIL CONSERVATION SERVICE

The Soil Conservation Service publishes reports following the principal snow survey dates from January 1 through June 1 in cooperation with state water administrators, agricultural experiment stations and others. Copies of the reports for Western United States and all state reports may be obtained from Soil Conservation Service, Western Regional Technical Service Center, Room 209, 701 N. W. Glisan, Portland, Oregon 97209.

Copies of state and local reports may also be obtained from state offices of the Soil Conservation Service in the following states:

| STATE              | ADDRESS   |
|--------------------|---|
| Alaska             | P. O. Box "F", Palmer, Alaska 99645                                 |
| Arizona            | 6029 Federal Building, Phoenix, Arizona 85025                       |
| Colorado (N. Mex.) | P. O. Box 17107, Denver, Colorado 80217                             |
| Idaho              | Room 345, 304 N. 8th. St., Boise, Idaho 83702                       |
| Montana            | P. O. Box 970, Bozeman, Montana 59715                               |
| Nevada             | P. O. Box 4850, Reno Nevada 89505                                   |
| Oregon             | 1218 S. W. Washington St., Portland, Oregon 97205                   |
| Utah               | 4012 Federal Bldg., 125 South State St., Salt Lake City, Utah 84111 |
| Washington         | 360 U.S. Court House, Spokane, Washington 99201                     |
| Wyoming            | P. O. Box 2440, Casper, Wyoming 82601                               |

## PUBLISHED BY OTHER AGENCIES

Water Supply Outlook reports prepared by other agencies include a report for California by the Water Supply Forecast and Snow Surveys Unit, California Department of Water Resources, P. O. Box 388, Sacramento, California 95802 --- and for British Columbia by the Department of Lands, Forests and Water Resources, Water Resources Service, Parliament Building, Victoria, British Columbia



# **WATER SUPPLY OUTLOOK FOR ARIZONA**

and  
FEDERAL - STATE - PRIVATE COOPERATIVE SNOW SURVEYS

*Issued by*

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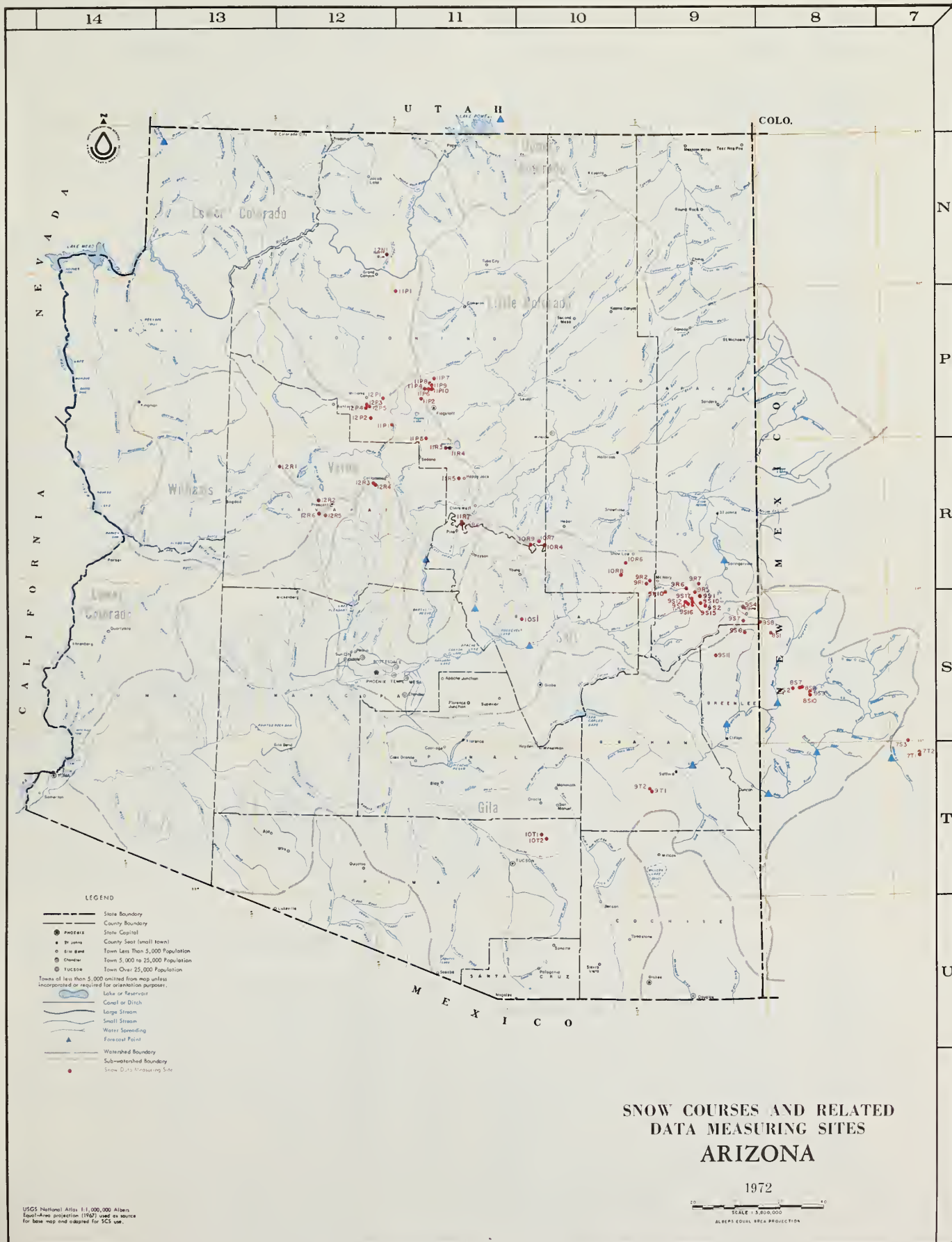
|||||  
*Report prepared by*

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SOIL CONSERVATION SERVICE  
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PHOENIX, ARIZONA 85025







# INDEX to SNOW COURSES and SOIL MOISTURE STATIONS

| NUMBER   | NAME                       | SEC. | TWP. | RGE.  | ELEV. | DRAINAGE           | OBSERVER |
|----------|----------------------------|------|------|-------|-------|--------------------|----------|
| 11P10-A  | Agassiz                    | 32   | 23N  | 7E    | 11200 | Little Colorado    | SCS-USBR |
| 11R7     | Baker Butte #2             | 9    | 12N  | 9E    | 7700  | Verde              | SCS      |
| 11R6     | Baker Butte (p)            | 4    | 12N  | 9E    | 7300  | Verde              | SCS      |
| 9S1-A    | Baldy (p)                  | 28   | 7N   | 27E   | 9125  | Little Colorado    | SCS      |
| 9S15     | Baldy #2                   | 12   | 6N   | 26E   | 9750  | Little Colorado    | SCS-FS   |
| 9S16     | Baldy #3                   | 13   | 6N   | 26E   | 10950 | Little Colorado    | SCS-FS   |
| 10T1     | Bear Wallow                | 6    | 12S  | 16E   | 8100  | Gila               | FS       |
| 9S6      | Beaver Head                | 13   | 4N   | 30E   | 8000  | San Francisco      | Pvt-SRP  |
| 12P5     | Bill Williams Intermediate | 17   | 21N  | 2E    | 8550  | Cataract           | FS       |
| 12P4     | Bill Williams Summit       | 17   | 21N  | 2E    | 8950  | Verde              | FS       |
| 9S10-*   | Black River Divide         | 10   | 6N   | 27E   | 9400  | Salt               | SCS      |
| 12N1     | Bright Angel               | 34   | 33N  | 3E    | 8400  | Bright Angel Creek | NPS      |
| 12R1     | Camp Wood                  | 3    | 16N  | 6W    | 5700  | Verde              | FS       |
| 10R7-M   | Canyon Creek #2            | 18   | 11N  | 15E   | 7500  | Little Colorado    | SCS      |
| 10R9     | Canyon Point (p)           | 28   | 11N  | 14E   | 7600  | Salt               | SCS      |
| 12P1-M   | Chalender                  | 27   | 22N  | 3E    | 7100  | Verde              | FS       |
| 9R7      | Cheese Springs             | 28   | 8N   | 27E   | 8600  | Little Colorado    | SCS      |
| 12R6     | Copper Basin Divide (p)    | 23   | 13N  | 3W    | 6720  | Verde              | SCS      |
| 10R8-*   | Corduoy Creek              | 4    | 8N   | 21E   | 6000  | Salt               | SCS      |
| 9S7      | Coronado Trail             | 26   | 5N   | 30E   | 8000  | San Francisco      | FS       |
| 9T2-A    | Crazy Horse                | 34   | 8S   | 24E   | 10200 | Gila               | FS       |
| 7T1      | Emory Pass #1              | 16   | 16S  | 9W**  | 7800  | Mimbres            | SCS      |
| 7T2      | Emory Pass #2              | 16   | 16S  | 9W**  | 7800  | Mimbres            | SCS      |
| 10R6     | Forest Dale                | 2    | 9N   | 21E   | 6430  | Salt               | BIA      |
| 9R5      | Ft. Apache                 | 18   | 7N   | 27E   | 9160  | Little Colorado    | SCS      |
| 11P2     | Ft. Valley (p)             | 22   | 22N  | 6E    | 7350  | Little Colorado    | FS       |
| 8S1-M    | Frisco Divide              | 31   | 6S   | 20W** | 8000  | San Francisco      | FS       |
| 12R4     | Gaddes Canyon              | 11   | 15N  | 2E    | 7600  | Verde              | Pvt      |
| 11P1     | Grand Canyon               | 21   | 30N  | 4E    | 7500  | Hance Creek        | NPS      |
| 9S11     | Hannagan Meadows (p)       | 19   | 3N   | 29E   | 9090  | San Francisco      | Pvt      |
| 11R5     | Happy Jack                 | 30   | 16N  | 9E    | 7630  | Verde              | FS       |
| 9R10     | Hawley Lake                | 13   | 7N   | 24E   | 8300  | Salt               | BIA      |
| 10R4     | Heber (p)                  | 28   | 11N  | 15E   | 7600  | Little Colorado    | SCS      |
| 9T1-A    | High Peak                  | 34   | 8S   | 24E   | 10500 | Gila               | FS       |
| 8S9-A    | Hummingbird                | 19   | 11S  | 17W** | 10550 | Gila               | Pvt-SCS  |
| 11P9     | Inner Basin #1 (p)         | 28   | 23N  | 7E    | 10000 | Little Colorado    | SCS-USBR |
| 11P8     | Inner Basin #2 (p)         | 28   | 23N  | 7E    | 9750  | Little Colorado    | SCS-USBR |
| 11P7     | Inner Basin #3             | 3    | 23N  | 7E    | 10250 | Little Colorado    | SCS-USBR |
| 12R2     | Iron Springs               | 22   | 14N  | 3W    | 6200  | Bill Williams      | SCS      |
| 9S2-A    | Maverick Fork (p)          | 13   | 6N   | 27E   | 9150  | Salt               | SCS      |
| 7S3-A    | McKnight Cabin             | 10   | 15S  | 10W** | 9300  | Mimbres            | Pvt-SCS  |
| 9R2-M    | McNary                     | 23   | 8N   | 23E   | 72000 | Salt               | BIA      |
| 9R1      | Milk Ranch                 | 33   | 8N   | 23E   | 7000  | Salt               | BIA      |
| 12R3     | Mingus Mountain            | 3    | 15N  | 2E    | 7100  | Verde              | Pvt      |
| 8S2      | Mogollon                   | 2    | 11S  | 19W** | 7000  | San Francisco      | Pvt      |
| 11R4     | Mormon Lake                | 13   | 18N  | 8E    | 7350  | Little Colorado    | SCS      |
| 11R3-M-A | Mormon Mountain (p)        | 14   | 18N  | 8E    | 7500  | Verde              | SCS      |
| 9S12-A   | Mt. Ord                    | 4    | 6N   | 26E   | 11200 | Salt               | SRP-SCS  |
| 11P5-M   | Newman Park                | 25   | 19N  | 6E    | 6750  | Verde              | SCS      |
| 9S4      | Nutriosio                  | 23   | 6N   | 30E   | 8500  | San Francisco      | FS       |
| 8S7      | Redstone Trail             | 5    | 11S  | 18W** | 8600  | San Francisco      | Pvt      |
| 10T2     | Rose Canyon                | 15   | 12S  | 16E   | 7300  | Gila               | FS       |
| 8S8      | Silver Creek Divide        | 4    | 11S  | 18W** | 9000  | San Francisco      | Pvt      |
| 9S14-A   | Smith Cienega              | 10   | 6N   | 26E   | 10050 | Salt               | SRP-SCS  |
| 11P4     | Snow Bowl #1 (p)           | 36   | 23N  | 6E    | 10260 | Verde              | FS       |
| 11P6     | Snow Bowl #2               | 31   | 23N  | 7E    | 11000 | Verde              | FS       |
| 9S8      | State Line                 | 6    | 6S   | 21W** | 8000  | San Francisco      | FS       |
| 9S17     | Sunrise Summit             | 36   | 7N   | 26E   | 10600 | Salt               | FAIR     |
| 12P2     | White Horse Lake Jct.      | 2    | 20N  | 2E    | 7180  | Verde              | FS       |
| 12R5     | White Spar                 | 19   | 13N  | 2W    | 6000  | Verde              | SCS      |
| 8S10-A   | Whitewater                 | 19   | 11S  | 17W** | 10750 | Gila               | Pvt-SCS  |
| 12P3     | Williams Ski Run           | 9    | 21N  | 2E    | 7720  | Cataract           | FS       |
| 9R6      | Wilson Lake (p)            | 4    | 7N   | 26E   | 9000  | Salt               | SCS      |
| 10S1     | Workman Creek              | 33   | 6N   | 14E   | 6900  | Salt               | FS       |

M SOIL MOISTURE STA.

(p) STORAGE GAGE

A AERIAL SNOW DEPTH MARKER

\* SOIL MOISTURE STA. ONLY

\*\* NM PRINCIPAL MERIDIAN



# ARIZONA WATER SUPPLY OUTLOOK

FEBRUARY 15, 1972

Near normal water supplies are predicted for all areas served by storage reservoirs. Runoff from Arizona watersheds will be well below average, so some shortages may occur in areas depending on direct diversions.

## SNOW COVER

With no storms in almost two months, the snow cover is now much below average. At 10,000' and above, the snow is holding well, but at the lower elevations steady melting continues. Between 7,000 and 8,000', snow remains only in patches on north slopes and in well shaded areas. Snow cover is 58% of average on the Gila Watershed, 53% on the Salt, and 19% on the Verde.

## PRECIPITATION

With no significant precipitation in 52 days, this is probably the longest January-February dry spell in sixty years. Most stations reported zero precipitation. Since November 1, precipitation has been 50% of average on the Verde Watershed, 64% on the Salt, and 80% on the Gila.

## SOIL MOISTURE

Surface soils are now very dry except where there is still snow cover. Subsoils are moderately wet in the better water yielding areas, so moderate runoff could result from heavy precipitation.

## RESERVOIR STORAGE

Near normal water supplies are in storage in the major reservoirs of central Arizona. Salt River Project Reservoirs are exactly at the 1953-1967 15-year average, containing 50% of capacity. San Carlos and Lake Pleasant are 23% and 31% above average, but only 14% and 35% of capacity respectively. The combined storage of the Colorado River Reservoirs is 77% above average at 62% of capacity.

## STREAMFLOW AND WATER SUPPLY

Arizona streamflow forecasts for the February-May period were all lowered as a result of the continued absence of precipitation. Salt River Project streams are expected to yield about half of average, although twice that received last year. The Gila River forecast of 70% of average will produce almost four times last year's yield. The only really bright spot is along the Colorado River where another good year is assured. The 8,628,000 acre-feet runoff forecast for April-July is 32% above average.

With reservoir storage near normal or above, adequate water supplies are predicted in all areas except those depending on direct diversions. These areas will receive below normal water supplies this year.

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Section 2

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Section 3

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Section 4

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Section 5

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Section 6: [Faint text describing the sixth part of the document.]

ABOUT  
STREAMFLOW FORECASTS FEB. 15, 1972

| STREAMFLOW FORECASTS FEB. 15, 1972  |                    | THIS YEAR          |                 | PAST RECORD        |           |
|---|--------------------|--------------------|-----------------|--------------------|-----------|
| BASIN STREAM and/or FORECAST POINT  | FORECAST           |                    | FORECAST PERIOD | THOUSAND ACRE FEET |           |
|   | Thousand Acre Feet | Percent of Average |                 | Last Year          | Average † |
| <u>SALT RIVER DRAINAGE</u>  |                    |                    |                 |                    |           |
| Salt near Roosevelt   | 120                | 50                 | Feb-May         | 55.4               | 239.4     |
| Tonto Creek near Roosevelt  | 7                  | 24                 | Feb-May         | 4.3                | 29.3      |
| Verde River above Horseshoe   | 62                 | 44                 | Feb-May         | 50.7               | 139.7     |
| <u>GILA RIVER DRAINAGE</u>  |                    |                    |                 |                    |           |
| Gila River near Gila  | 30                 | 78                 | Feb-May         | 11.8               | 38.3      |
| Gila River near Solomon   | 65                 | 68                 | Feb-May         | 18.2               | 95.4      |
| Gila River near Solomon   | 24                 | 63                 | March           | 5.1                | 38.4      |
| Gila River near Virden  | 33                 | 69                 | Feb-May         | 10.1               | 47.8      |
| Frisco River at Clifton   | 34                 | 70                 | Feb-May         | 10.3               | 48.7      |
| Frisco River at Glenwood  | 13                 | 67                 | Feb-May         | 4.3                | 19.5      |
| <u>MIMBRES RIVER DRAINAGE</u>   |                    |                    |                 |                    |           |
| Mimbres River near Mimbres  | 1.2                | 43                 | Feb-May         | 0.5                | 2.8       |
| <u>COLORADO RIVER DRAINAGE</u>  |                    |                    |                 |                    |           |
| Little Colo. River above Lyman Dam  | 4.0                | 47                 | Feb-June        | 1.1                | 8.5       |
| Colorado River -- Lake Powell Inflow *                                    | 8628.0             | 132                | Apr-July        | 8378.0             | 6527.0    |
| <u>VIRGIN RIVER DRAINAGE</u>  |                    |                    |                 |                    |           |
| Virgin River nr. Littlefield  | 40                 | 120                | Apr-June        | 17.4               | 33.4      |
| <u>GRANITE CREEK DRAINAGE</u>   |                    |                    |                 |                    |           |
| Granite Creek   | 1.0                | ---                | Feb-May         | ---                | ---       |
| Willow Creek  | 0.5                | ---                | Feb-May         | ---                | ---       |
| † Based on the 15-year period, 1953-67                                    |                    |                    |                 |                    |           |
| * Forecast issued by<br>Soil Conservation Service<br>Salt Lake City, Utah |                    |                    |                 |                    |           |





## RESERVOIR STORAGE (Thousand Acre Feet) MID-MONTH READING

ABOUT FEBRUARY 15, 1972

ADDITIONAL FEBRUARY 15, 1972

| Basin or Stream                               | RESERVOIR                            | Usable Capacity | Usable Storage |           |          |
|---|--------------------------------------|-----------------|----------------|-----------|----------|
|   |                                      |                 | This Year      | Last Year | Average† |
| <u>GILA RIVER DRAINAGE</u>                    |                                      |                 |                |           |          |
| Agua Fria                                     | Lake Pleasant                        | 157.6           | 55.3           | 76.1      | 41.9     |
| Granite                                       | Watson Lake                          | 4.7             | 3.2            | 1.8       | -----    |
| Granite                                       | Willow Creek                         | 6.1             | 1.6            | 1.1       | -----    |
| Gila  | San Carlos                           | 948.6           | 131.6          | 10.4      | 106.8    |
| Verde (2)                                     | Bartlett & Horseshoe                 | 317.7           | 119.3          | 154.3     | 109.4    |
| Salt (4)                                      | Roosevelt, Apache, Canyon, & Saguaro | 1755.0          | 935.8          | 946.9     | 948.0    |
| <u>COLORADO RIVER DRAINAGE</u>                |                                      |                 |                |           |          |
| Colorado                                      | Lake Havasu                          | 619.4           | 542.2          | 544.7     | 536.5    |
| Colorado                                      | Lake Mohave                          | 1810.0          | 1655.0         | 1707.0    | 1690.0   |
| Colorado                                      | Lake Mead                            | 26159.0         | 17910.0        | 16987.0   | 16505.2  |
| Colorado                                      | Lake Powell                          | 25002.0         | 12913.0        | 9366.0    | -----    |
| Little Colorado                               | Lyman                                | 30.6            | 8.4            | 19.4      | 9.2      |
| Little Colorado                               | Show Low Lake                        | 5.1             | 3.0            | 0.4       | 1.7*     |
| † Based on 15-year period, 1953-67            |                                      |                 |                |           |          |
| * Average is for less than 15 years of record |                                      |                 |                |           |          |
| - 3 -   |                                      |                 |                |           |          |



## (COMPARISON WITH PREVIOUS YEARS)

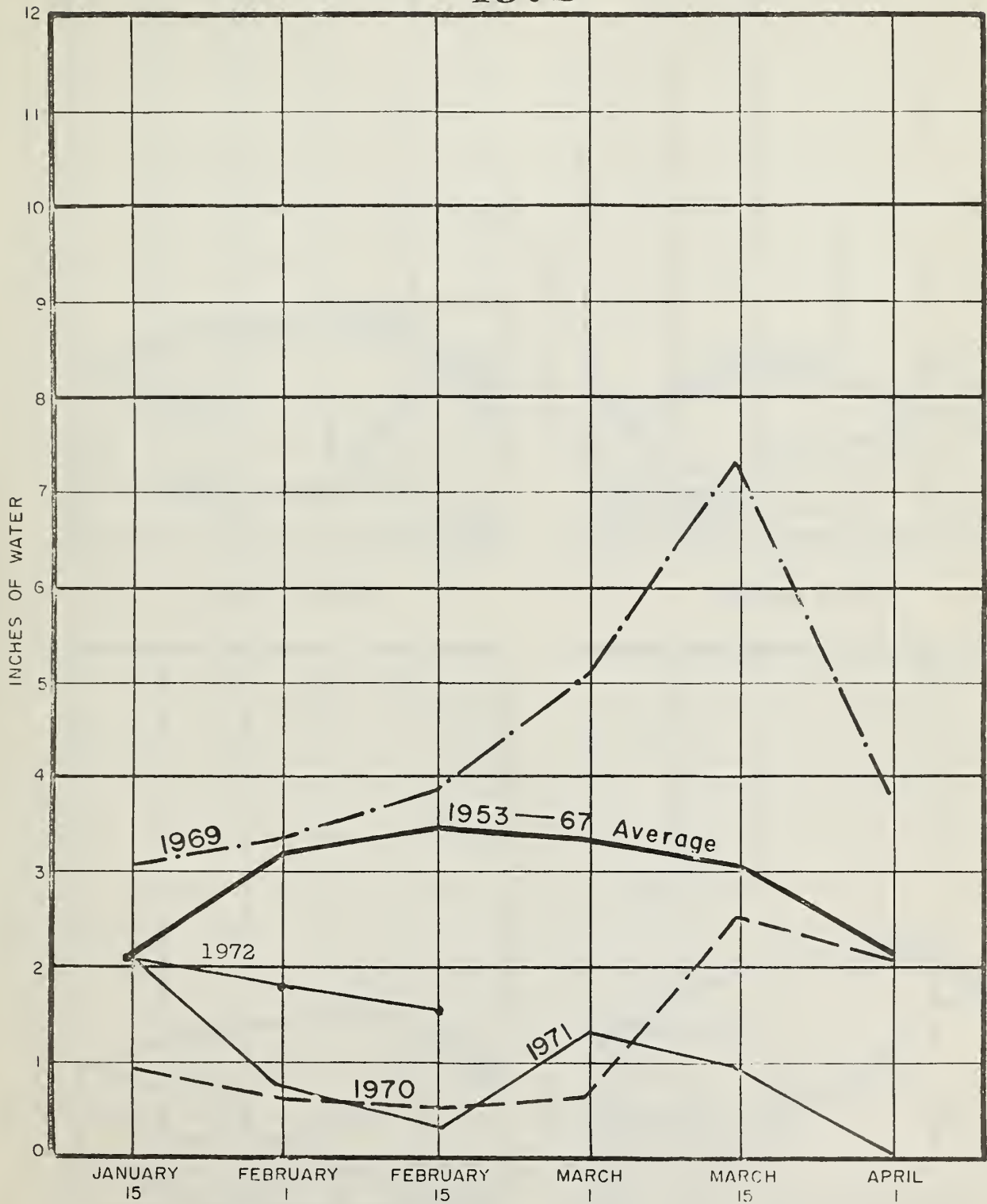
ABOUT FEBRUARY 15, 1972

| RIVER BASIN and/or SUB-WATERSHED | Number of Courses Averaged | THIS YEAR'S SNOW WATER AS PERCENT OF: |         |
|----------------------------------|----------------------------|---------------------------------------|---------|
|                                  |                            | Last Year                             | Average |
| Gila                             | 10                         | 900                                   | 56      |
| Salt                             | 10                         | 423                                   | 53      |
| Verde                            | 10                         | 59                                    | 19      |
| Little Colorado                  | 5                          | 270                                   | 71      |





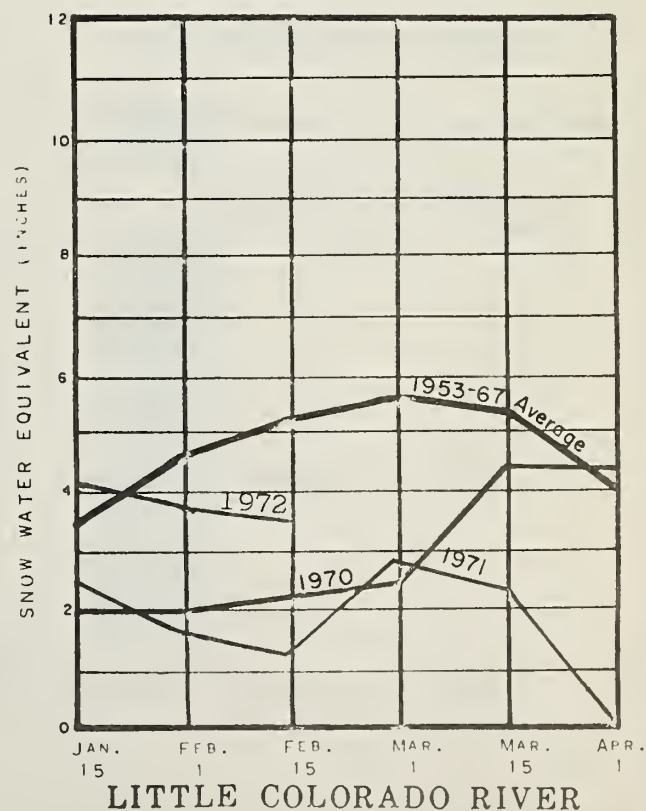
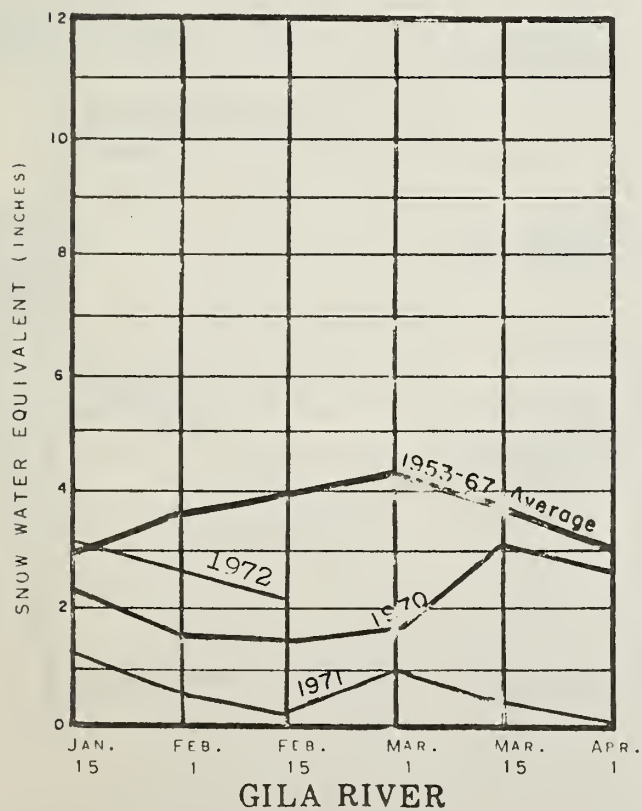
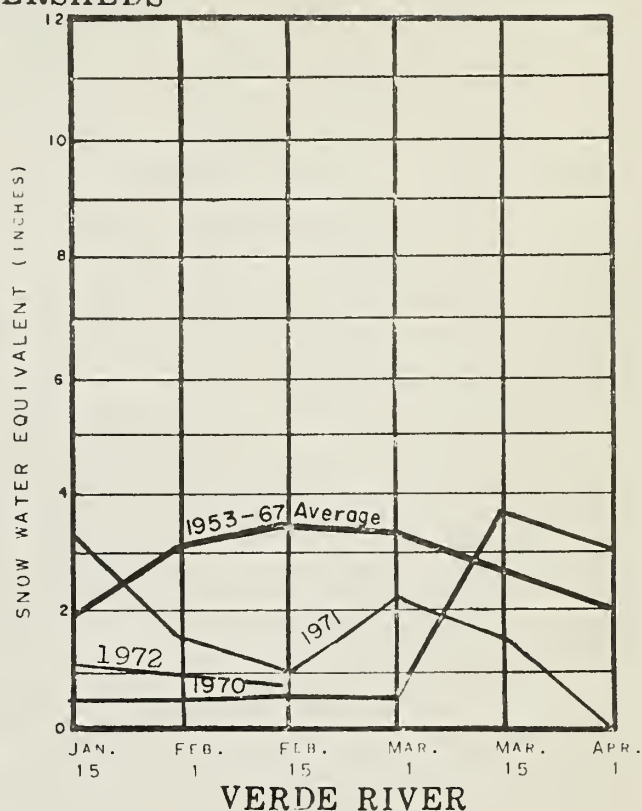
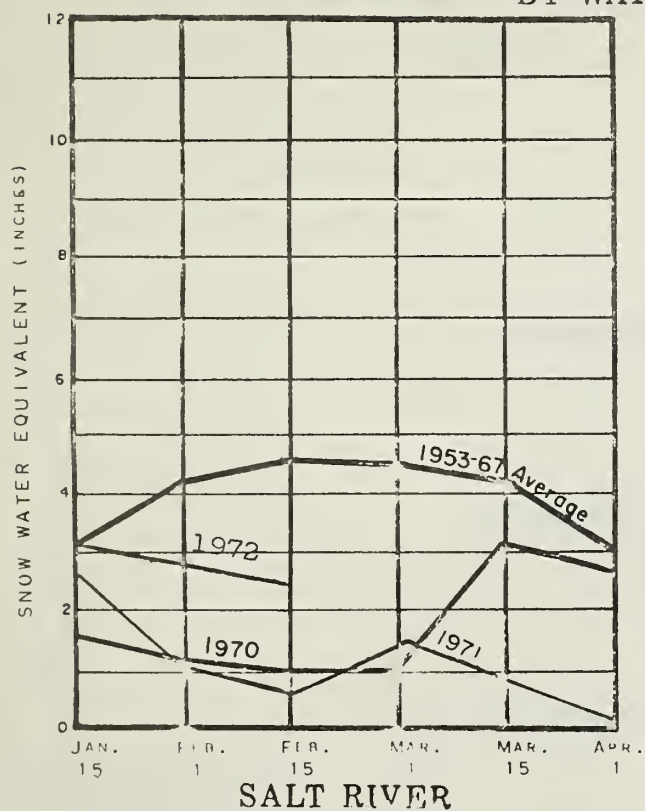
# RELATIVE SNOW WATER ACCUMULATION ARIZONA 1972



*This graph represents the average snow water content on eleven selected snow courses on Arizona Sub-Watersheds.*



# 1972 ARIZONA SNOW COVER BY WATERSHEDS



# THEORY OF THE EARTHQUAKE





WATER SUPPLY INVENTORY  
SALT RIVER VALLEY SYSTEM  
FEBRUARY 15, 1972

3,000,000

2,500,000

F  
E  
E  
F  
2,000,000

AVERAGE SUPPLY ON  
FEBRUARY 15



Average Summer  
Runoff

Average Spring  
Runoff

Average  
Storage

A  
C  
R  
E  
1,500,000

1,000,000

500,000

0

ANTICIPATED 1972 SUPPLY \*



Average Summer Runoff

Forecast Runoff  
(February 15 - May)

Present Storage

\* Based on Present Storage + Forecast Spring Runoff + Average Summer Runoff



## SNOW

ABOUT FEBRUARY 15, 1972

| SNOW                              |           | ABOUT FEBRUARY 15, 1972 |                     | THIS YEAR              |                        |           | PAST RECORD |  |
|-----------------------------------|-----------|-------------------------|---------------------|------------------------|------------------------|-----------|-------------|--|
| DRAINAGE BASIN and/or SNOW COURSE |           | Date of Survey          | Snow Depth (Inches) | Water Content (Inches) | Water Content (inches) |           |             |  |
| NAME                              | Elevation |                         |                     |                        | Last Year              | Average † |             |  |
| <u>GILA RIVER</u>                 |           |                         |                     |                        |                        |           |             |  |
| Bear Wallow                       | 8100      | 2/14                    | 0                   | 0.0                    | 0.0                    | 4.3       |             |  |
| Beaver Head                       | 8000      | 2/15                    | 2                   | 1.0                    | 0.0                    | 2.7       |             |  |
| Coronado Trail                    | 8000      | 2/15                    | 1                   | 0.5                    | 0.0                    | 2.3       |             |  |
| Crazy Horse (A)                   | 10200     | ---                     | ---                 | ---                    | 2.5                    | ---       |             |  |
| Emory Pass #1 *                   | 7800      | 2/14                    | 0                   | 0.0                    | 0.0                    | ---       |             |  |
| Emory Pass #2 *                   | 7800      | 2/14                    | 2                   | 0.7                    | 0.0                    | ---       |             |  |
| Frisco Divide                     | 8000      | 2/14                    | 3                   | 1.2                    | 0.0                    | 2.1       |             |  |
| Hannagan Meadows *                | 9090      | 2/14                    | 17                  | 6.0                    | 0.3                    | 8.1**     |             |  |
| High Peak (A)                     | 10500     | ---                     | ---                 | ---                    | ---                    | ---       |             |  |
| Hummingbird (A)                   | 10550     | 2/15                    | 45                  | 13.0                   | 4.1                    | 11.8**    |             |  |
| McKnight Cabin * (A)              | 9300      | 2/15                    | 12                  | 4.2                    | 0.0                    | ---       |             |  |
| Mogollon                          | 7000      | 2/13                    | 0                   | 0.0                    | 0.0                    | 1.9       |             |  |
| Nutriosos                         | 8500      | 2/15                    | 1                   | 0.7                    | 0.0                    | 1.6       |             |  |
| Redstone Trail                    | 8600      | 2/13                    | 12                  | 4.3                    | 0.3                    | 7.0**     |             |  |
| Rose Canyon                       | 7300      | 2/14                    | 0                   | 0.0                    | 0.0                    | 2.8       |             |  |
| Silver Creek Divide               | 9000      | 2/13                    | 22                  | 7.0                    | 1.8                    | 9.6**     |             |  |
| State Line                        | 8000      | 2/14                    | 3                   | 1.2                    | 0.0                    | 2.2       |             |  |
| Whitewater (A)                    | 10750     | 2/15                    | 55                  | 19.2                   | 5.0                    | 14.1**    |             |  |
| <u>SALT RIVER</u>                 |           |                         |                     |                        |                        |           |             |  |
| Baldy *                           | 9125      | 2/14                    | 14                  | 4.3                    | 0.3                    | 6.1       |             |  |
| Beaver Head                       | 8000      | 2/14                    | 2                   | 1.0                    | 0.0                    | 2.7       |             |  |
| Canyon Creek                      | 7500      | 2/13                    | 1                   | 0.2                    | 0.3                    | 2.9**     |             |  |
| Canyon Point                      | 7600      | 2/13                    | 0                   | 0.0                    | 0.3                    | 3.5**     |             |  |
| Coronado Trail                    | 8000      | 2/15                    | 1                   | 0.5                    | 0.0                    | 2.3       |             |  |
| Forest Dale                       | 6430      | 2/14                    | 0                   | 0.0                    | 0.0                    | 1.2       |             |  |
| Ft. Apache                        | 9160      | 2/14                    | 18                  | 5.1                    | 2.1                    | 6.5       |             |  |
| Hannagan Meadows                  | 9090      | 2/14                    | 17                  | 6.0                    | 0.3                    | 8.1**     |             |  |
| Hawley Lake                       | 8300      | 2/14                    | 5                   | 2.1                    | 2.5                    | 5.5**     |             |  |
| Heber                             | 7600      | 2/14                    | 1                   | 0.2                    | 0.4                    | 3.0       |             |  |
| Maverick Fork                     | 9050      | 2/14                    | 18                  | 5.5                    | 0.2                    | 7.4       |             |  |
| McNary                            | 7200      | 2/14                    | 1                   | 0.2                    | 0.0                    | 2.5       |             |  |
| Milk Ranch                        | 7000      | 2/14                    | 0                   | 0.0                    | 0.0                    | 1.7       |             |  |
| Mt. Ord (A)                       | 11000     | ---                     | ---                 | ---                    | ---                    | 15.8**    |             |  |
| Nutriosos *                       | 8500      | 2/15                    | 1                   | 0.7                    | 0.0                    | 1.6       |             |  |
| Smith Cienega (A)                 | 9850      | ---                     | ---                 | ---                    | ---                    | 11.0**    |             |  |
| Sunrise Summit                    | 10600     | 2/15                    | 34#                 | 12.5#                  | ---                    | ---       |             |  |
| Wilson Lake                       | 9000      | 2/14                    | 26                  | 7.5                    | 4.2                    | 8.2**     |             |  |
| Workman Creek                     | 6900      | 2/11                    | 3                   | 0.9                    | 2.3                    | 4.5       |             |  |
| <u>BILL WILLIAMS RIVER</u>        |           |                         |                     |                        |                        |           |             |  |
| Camp Wood *                       | 5700      | 2/14                    | 0                   | 0.0                    | 0.0                    | 0.5       |             |  |
| Copper Basin Divide               | 6720      | 2/14                    | 0                   | 0.0                    | 0.0                    | 2.1**     |             |  |
| Iron Springs                      | 6200      | 2/14                    | 0                   | 0.0                    | 0.0                    | 0.6       |             |  |

† 1953-67 15-year period. (\*) Adjacent drainage. (\*\*) 1953-67 Adjusted average. (A) Aerial observation; Water content estimated.  
# Estimate.





## SNOW

ABOUT FEBRUARY 15, 1972

| DRAINAGE BASIN and/or SNOW COURSE |           | THIS YEAR      |                     |                        | PAST RECORD            |           |
|-----------------------------------|-----------|----------------|---------------------|------------------------|------------------------|-----------|
|                                   |           | Date of Survey | Snow Depth (Inches) | Water Content (Inches) | Water Content (inches) |           |
| NAME                              | Elevation |                |                     |                        | Last Year              | Average † |
| <u>VERDE RIVER</u>                |           |                |                     |                        |                        |           |
| Baker Butte                       | 7300      | 2/13           | 3                   | 1.6                    | 1.6                    | 5.0**     |
| Baker Butte #2                    | 7700      | 2/13           | 13                  | 4.5                    | ---                    | ---       |
| Camp Wood                         | 5700      | 2/14           | 0                   | 0.0                    | 0.0                    | 0.5       |
| Chalender                         | 7100      | 2/14           | 1                   | 0.2                    | 0.4                    | 2.5       |
| Copper Basin Divide               | 6720      | 2/14           | 0                   | 0.0                    | 0.0                    | 2.1**     |
| Fort Valley                       | 7350      | 2/14           | 0                   | 0.0                    | 0.0                    | 1.8       |
| Gaddes Canyon                     | 7600      | 2/14           | 0                   | 0.0                    | 1.6                    | 3.8**     |
| Happy Jack                        | 7630      | 2/14           | 0                   | 0.0                    | 0.0                    | 2.7       |
| Iron Springs *                    | 6200      | 2/14           | 0                   | 0.0                    | 0.0                    | 0.6       |
| Mingus Mountain                   | 7100      | 2/14           | 0                   | 0.0                    | 0.0                    | 0.9       |
| Mormon Lake *                     | 7350      | 2/14           | 0                   | 0.0                    | 1.2                    | 3.1       |
| Mormon Mountain                   | 7500      | 2/14           | 1                   | 0.2                    | 1.3                    | 3.9       |
| Newman Park                       | 6750      | 2/14           | 0                   | 0.0                    | 0.0                    | 1.6**     |
| Snow Bowl #1                      | 10260     | 2/16           | 22                  | 7.3                    | 4.7                    | 8.0**     |
| Snow Bowl #2                      | 11000     | 2/16           | 38                  | 13.1                   | 6.0                    | 12.5**    |
| White Horse Lake Jct.             | 7150      | 2/14           | 0                   | 0.0                    | 0.0                    | ---       |
| White Spar                        | 6000      | 2/14           | 0                   | 0.0                    | 0.0                    | 1.0**     |
| <u>LOWER COLORADO RIVER</u>       |           |                |                     |                        |                        |           |
| Bill Wms. Intermediate            | 8550      | 2/14           | 6                   | 1.8                    | 2.7                    | ---       |
| Bill Williams Summit              | 8950      | 2/14           | 17                  | 4.8                    | 4.9                    | ---       |
| Bright Angel                      | 8400      | 2/11           | 8                   | 2.6                    | ---                    | ---       |
| Chalender *                       | 7100      | 2/14           | 1                   | 0.2                    | 0.4                    | 2.5       |
| Fort Valley                       | 7350      | 2/14           | 0                   | 0.0                    | 0.0                    | 1.8       |
| Grand Canyon                      | 7500      | 2/14           | 0                   | 0.0                    | 0.0                    | 1.7       |
| Williams Ski Run                  | 7720      | 2/14           | 6                   | 1.7                    | 3.0                    | ---       |
| <u>LITTLE COLORADO RIVER</u>      |           |                |                     |                        |                        |           |
| Agassiz                           | 11200     | ---            | ---                 | ---                    | ---                    | ---       |
| Baldy                             | 9125      | 2/14           | 13                  | 4.5                    | 0.3                    | 6.1       |
| Canyon Creek                      | 7500      | 2/13           | 1                   | 0.2                    | 0.3                    | 2.9**     |
| Canyon Point                      | 7600      | 2/13           | 0                   | 0.0                    | 0.3                    | 3.5**     |
| Cheese Springs                    | 8600      | 2/14           | 17                  | 4.5                    | 1.6                    | ---       |
| Forest Dale                       | 6430      | 2/14           | 0                   | 0.0                    | 0.0                    | 1.2       |
| Ft. Apache                        | 9160      | 2/14           | 18                  | 5.1                    | 2.1                    | 6.5       |
| Fort Valley                       | 7350      | 2/14           | 0                   | 0.0                    | 0.0                    | 1.8       |
| Happy Jack *                      | 7630      | 2/14           | 0                   | 0.0                    | 0.0                    | 2.7       |
| Heber                             | 7600      | 2/13           | 1                   | 0.2                    | 0.4                    | 3.0       |
| Inner Basin #1                    | 10100     | ---            | ---                 | ---                    | ---                    | ---       |
| Inner Basin #2                    | 9750      | ---            | ---                 | ---                    | ---                    | ---       |
| Inner Basin #3                    | 10250     | ---            | ---                 | ---                    | ---                    | ---       |
| McNary                            | 7200      | 2/14           | 1                   | 0.2                    | 0.0                    | 2.5       |
| Mormon Lake                       | 7350      | 2/14           | 0                   | 0.0                    | 1.2                    | 3.1       |
| Mormon Mountain                   | 7500      | 2/14           | 1                   | 0.2                    | 1.3                    | 3.9       |
| Nutriosos                         | 8500      | 2/15           | 1                   | 0.7                    | 0.0                    | 1.6       |
| Snow Bowl #1                      | 10260     | 2/16           | 22                  | 7.3                    | 4.7                    | 8.0**     |
| Snow Bowl #2                      | 11000     | 2/16           | 38                  | 13.1                   | 6.0                    | 12.5**    |
| Wilson Lake *                     | 9000      | 2/14           | 26                  | 7.5                    | 4.2                    | 8.2**     |

† 1953-67 15-year period. (\*) Adjacent drainage. (\*\*) 1953-67  
Adjusted average. (A) Aerial observations. Water content estimated.



PRECIPITATION AT SELECTED ARIZONA STATIONS 1/

| STATION               | Precipitation - Inches |                          |  |                          |
|-----------------------|------------------------|--------------------------|--|--------------------------|
|                       | January - 1972         |                          | Current Water Year<br>(Oct. 1971-January 1972) |                          |
|                       | Total                  | Departure from<br>Normal | Total  | Departure from<br>Normal |
| Alpine                | T                      | - 1.60                   | 8.29   | + 2.89                   |
| Ash Fork              | 0                      | - 1.02                   | 2.29   | - 1.33                   |
| Clifton               | 0                      | - .91                    | 4.50   | + 1.13                   |
| Douglas Smelter       | 0                      | - .72                    | 3.52   | + 1.03                   |
| Flagstaff WSO*        | 0                      | - 1.83                   | 8.95   | + 2.95                   |
| McNary                | .09                    | - 2.37                   | 14.29  | + 6.19                   |
| Payson Ranger Station | 0                      | - 2.12                   | 6.01   | - .86                    |
| Phoenix WSFO**        | 0                      | - .73                    | .74  | - 1.79                   |
| Prescott (City)       | 0                      | - 1.98                   | 4.04   | - 2.01                   |
| Springerville         | .07                    | - .64                    | 2.70   | + .26                    |
| Tucson WSO*           | 0                      | - .82                    | 3.84   | + .84                    |
| Winslow WSO*          | 0                      | - .43                    | 1.98   | + .01                    |
| Yuma WSO*             | 0                      | - .39                    | .15  | - 1.06                   |

1/ Data and Analysis furnished by Paul C. Kangieser  
NOAA Climatologist for Arizona  
National Weather Service, Phoenix

WSO\* Weather Service Office

WSFO\*\* Weather Service Forecast Office



# PRECIPITATION (Inches) ABOUT FEBRUARY 15, 1972

| DRAINAGE BASIN and<br>PRECIPITATION GAGE LOCATION | ELEVATION | CURRENT INFORMATION |                          |           | FROM APPROX. NOV. 1 TO DATE |           |                       |
|---|-----------|---------------------|--------------------------|-----------|-----------------------------|-----------|-----------------------|
|   |           | Date of<br>Reading  | Month's<br>Precipitation | Average † | This Year                   | Average † | Percent of<br>Average |
| <u>GILA RIVER</u>                                 |           |                     |                          |           |                             |           |                       |
| Silver Creek Divide                               | 9000      | 2/13                | .10                      | .90*      | 8.96                        | 9.92*     | 90                    |
| Hannagan Meadows                                  | 9030      | 2/15                | .11                      | 1.10*     | 6.52                        | 9.00*     | 72                    |
| Frisco Divide                                     | 8000      | 2/14                | 0                        | ---       | 3.81                        | ---       | --                    |
| <u>SALT RIVER</u>                                 |           |                     |                          |           |                             |           |                       |
| Canyon Point                                      | 7600      | 2/13                | 0                        | 1.40*     | 6.62                        | 11.79*    | 56                    |
| Hannagan Meadows                                  | 9030      | 2/15                | .11                      | 1.10*     | 6.52                        | 9.00*     | 72                    |
| Little Wildcat<br>(Heber Snow Course)             | 7600      | 2/13                | 0                        | 1.15*     | 7.62                        | 10.22*    | 75                    |
| Maverick Fork                                     | 9050      | 2/14                | .10                      | 1.12*     | 7.23                        | 8.81*     | 82                    |
| Workman Creek **                                  | 6970      | 2/11                | 0                        | 1.42      | 4.25                        | 12.46     | 34                    |
| Wilson Lake                                       | 9100      | 2/14                | .12                      | ----      | 6.74                        | ----      | --                    |
| <u>VERDE RIVER</u>                                |           |                     |                          |           |                             |           |                       |
| Baker Butte                                       | 7300      | 2/13                | .05                      | 1.29*     | 6.62                        | 12.75*    | 52                    |
| Copper Basin Divide                               | 6720      | 2/14                | .19                      | 1.07*     | 3.40                        | 7.86*     | 43                    |
| Fort Valley **                                    | 7350      | 2/14                | 0                        | .83       | 2.71                        | 6.43      | 42                    |
| Happy Jack **                                     | 7480      | 2/14                | 0                        | 1.07*     | 5.13                        | 7.79*     | 66                    |
| Mingus Mountain                                   | 7660      | 2/14                | 0                        | 1.01      | 2.65                        | 6.73      | 39                    |
| Mormon Mountain                                   | 7500      | 2/14                | .10                      | 1.35*     | 7.55                        | 11.36*    | 66                    |
| White Horse Lake Jct.                             | 7150      | 2/14                | .08                      | ---       | 6.16                        | ---       | --                    |
| <u>LITTLE COLORADO</u>                            |           |                     |                          |           |                             |           |                       |
| Inner Basin #1                                    | 9830      | ---                 | ---                      | ----      | ---                         | ----      | --                    |
| Inner Basin #2                                    | 10050     | ---                 | ---                      | ----      | ---                         | ----      | --                    |
| Sheep Crossing<br>(Baldy Snow Course)             | 9125      | 2/14                | .14                      | 1.00*     | 6.92                        | 8.43*     | 82                    |
| Little Wildcat<br>(Heber Snow Course)             | 7600      | 2/13                | 0                        | 1.15*     | 7.62                        | 10.22*    | 75                    |
| † 1953-67 Average                                 |           |                     |                          |           |                             |           |                       |
| * Adjusted Average                                |           |                     |                          |           |                             |           |                       |
| ** Data Supplied by<br>U.S. Forest Service        |           |                     |                          |           |                             |           |                       |





# SOIL MOISTURE ABOUT FEBRUARY 15, 1972

| DRAINAGE BASIN and/or STATION |           | Profile (Inches) |          |           | Date of Survey | Soil Moisture (Inches) |           |  |
|-------------------------------|-----------|------------------|----------|-----------|----------------|------------------------|-----------|--|
| Name                          | Elevation | Depth            | Capacity | This Year |                | Last Year              | Average † |  |
| <u>GILA RIVER</u>             |           |                  |          |           |                |                        |           |  |
| Frisco Divide                 | 8000      | 48               | 13.3     | 2/14      | 10.6           | 5.9                    | 10.8      |  |
| <u>SALT RIVER</u>             |           |                  |          |           |                |                        |           |  |
| Black River Divide            | 9100      | 48               | 16.8     | 2/14      | 17.7           | 18.3                   | 15.4      |  |
| Canyon Creek                  | 7500      | 48               | 18.3     | 2/13      | 17.8           | 17.6                   | 15.2      |  |
| Corduroy Creek                | 6000      | 36               | 13.5     | 2/14      | 11.5           | 8.3                    | 8.3       |  |
| McNary                        | 7200      | 48               | 16.3     | 2/14      | 17.9           | 14.8                   | 14.3      |  |
| <u>VERDE RIVER</u>            |           |                  |          |           |                |                        |           |  |
| Mormon Mountain               | 7500      | 48               | 16.1     | 2/14      | 17.0           | 14.9                   | 15.4      |  |
| Newman Park                   | 6750      | 48               | 17.7     | 2/14      | 16.9           | 18.4                   | 15.3      |  |
| † 1953-67 15-year average     |           |                  |          |           |                |                        |           |  |

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## SNOW COURSE

## SNOW SURVEYOR

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|                            |  |
|----------------------------|--|
| Baker Butte #1 & #2        | SCS - Dick Enz                                       |
| Baldy                      | SCS - Wallace Slade                                  |
| Bear Wallow                | Forest Service - Carl Sollers                        |
| Beaver Head                | Forest Service - Gene McDorman                       |
| Bill Williams Intermediate | Forest Service - Mike King                           |
| Bill Williams Summit       | Forest Service - Mike King                           |
| Bright Angel               | National Park Service - Kenneth Hulick               |
| Camp Wood                  | Forest Service - Walter G. Richardson                |
| Canyon Creek               | SCS - Dick Enz                                       |
| Canyon Point               | SCS- Dick Enz  |
| Chalender                  | Forest Service - M. Freshour                         |
| Cheese Springs             | SCS - Wallace Slade                                  |
| Copper Basin Divide        | SCS - William Valikai                                |
| Coronado Trail             | Forest Service - John O. Maeder                      |
| Crazy Horse                | Forest Service - Cecil Sims                          |
| Emory Pass #1 and #2       | SCS - Jim Powell and Travis Stevenson                |
| Forest Dale                | Bureau of Indian Affairs - Raymond Endfield          |
| Ft. Apache                 | SCS - Wallace Slade                                  |
| Fort Valley                | Rocky Mtn. Forest & Range Experiment Station         |
| Frisco Divide              | Forest Service - J. L. Lockwood                      |
| Gaddes Canyon              | Earl Barto   |
| Grand Canyon               | National Park Service - David A. Strobe & Jim Valder |
| Hannagan Meadows           | Forest Service - Gene McDorman                       |
| Happy Jack                 | Forest Service - Warren Harris                       |
| Hawley Lake                | Bureau of Indian Affairs - Raymond Endifeld          |
| Heber                      | SCS - Dick Enz                                       |
| High Peak                  | Forest Service - Cecil Sims                          |
| Hummingbird                | Ray Freeman  |
| Inner Basin #1, #2, #3     | SCS and USBR - Jack Jorgensen & Jay Roberts          |
| Iron Springs               | SCS - William Valikai                                |
| Maverick Fork              | SCS - Wallace Slade                                  |
| McKnight Cabin             | Ray Freeman  |
| McNary                     | Bureau of Indian Affairs - Raymond Endfield          |
| Milk Ranch                 | Bureau of Indian Affairs - Raymond Endfield          |
| Mingus Mountain            | Earl Barto   |
| Mogollon                   | James Lyon   |
| Mormon Lake                | SCS - Jack Jorgensen                                 |
| Mormon Mountain            | SCS - Jack Jorgensen                                 |
| Mt. Ord                    | Salt River Project - Bill Warskow                    |
| Newman Park                | SCS - Jack Jorgensen                                 |
| Nutriosio                  | Forest Service - John O. Maeder                      |
| Redstone Trail             | James Lyon   |
| Rose Canyon                | Forest Service - Carl Sollers                        |
| Silver Creek Divide        | James Lyon   |
| Smith Cienega              | Salt River Project - Bill Warskow                    |
| Snow Bowl #1 and #2        | Forest Service - Ky Porter                           |
| State Line                 | Forest Service - J. L. Lockwood                      |
| Sunrise Summit             | FAIR - Ron Malfara (Sunrise Ski Area)                |
| White Horse Lake Junction  | Forest Service - Mike King                           |
| White Spar                 | SCS - William Valikai                                |
| Whitewater                 | Ray Freeman  |
| Williams Ski Run           | Forest Service - Mike King                           |
| Wilson Lake                | SCS - Wallace Slade                                  |
| Workman Creek              | Rocky Mtn. Forest & Range Experiment Station         |





# The Following Organizations Cooperate in the Arizona Snow Survey Work

## FEDERAL

- Department of Agriculture
  - Soil Conservation Service
  - Forest Service
    - Apache Forest
    - Coconino Forest
    - Caranada Forest
    - Gila Forest
    - Kaibab Forest
    - Prescott Forest
    - Racky Mountain Forest and Range Experiment Station
    - Tonto Forest
- Department Of Commerce
  - NOAA, Notional Weather Service
- Department of Interior
  - Bureau of Reclamation
    - Region III
  - Geological Survey
    - Arizona District
  - Bureau of Indian Affairs
    - Fort Apache Reservation
    - San Carlos Irrigation Project
  - National Park Service
    - Grand Canyon Notional Park
- Gila Water Commissioner
  - Safford, Arizona

## STATE

- Arizona Game and Fish Department
- Arizona State Parks Board
- University of Arizona
  - Arizona Agricultural Experiment Station
  - Water Resource Research Center

## IRRIGATION PROJECTS

- Salt River Valley Water User's Association
  - Phoenix, Arizona
- San Carlos Irrigation and Drainage District
  - Coalidge, Arizona

## PRIVATE

- Southwest Forest Industries, Inc.
  - McNary, Arizona
- Fort Apache Indian Reservation
  - White Mountain Recreation Enterprises

Other organizations and individuals furnish valuable information for the snow survey reports. Their cooperation is gratefully acknowledged.

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